



2009 Honda
CRF450R





2009 Honda CRF450R

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Here's the indisputable truth: Honda's CRF450R is a proven winner. Since its first appearance in late 2001, the CRF450R has done plenty of winning in professional Supercross and Motocross competition. Weekend warriors also consider the CRF450R a big-time winner, whether it's racing at the local level or simply enjoying an afternoon's track outing aboard this remarkable 450. All of which points to a machine that's as versatile as it is victorious. Just as impressive, beginning with its debut the CRF450R has been repeatedly judged as best-in-class by the guys who test them all. Every year the CRF450R collects rave reviews, 10-best honors and front-of-the-pack titles from enthusiast publications.

450-class-leading power along with CRF250R-like handling

With such an enviable level of success plus the nonstop refinement that has followed the CRF450R since its beginnings, it would be natural to assume that quantum leaps in improvement with new versions might be impossible, right? Well, it takes only one look at the 2009 CRF450R to flush that theory down the drain. Now in the all-new and lighter CRF450R, witness an unprecedented level of design synergy as a brand-new engine, developed concurrently with an entirely new rolling chassis, deliver 450-class-leading power along with CRF250R-like handling. Toss the strategic addition of EFI into the mix—in a configuration that brings benefits related not only to fuel metering but also to the size and placement of vital chassis components—and it all adds up to an unprecedented combination of power, suspension and handling that together bring a genuine revolution to the premier motocross class.

Here's a broad overview of what's new in the CRF450R for 2009:

- All-new lighter, more compact engine
- Programmed Fuel Injection (PGM-FI)
- All-new lighter, HPSD-equipped twin-spar aluminum frame featuring a longer swingarm and a lower Cg for improved handling and better front-wheel turning characteristics
- Kayaba front and rear suspension, featuring upper and lower fork tubes and a shock body developed exclusively for the CRF450R chassis
- New high-volume airbox for enhanced breathing and increased power also improves filter access
- Innovative exhaust system to enhance mass centralization
- All-new bodywork that improves ergonomics
- All-new lighter brake rotors

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The addition of fuel injection

Naturally, the big buzz about the 2009 CRF450R tends to focus on its all-new battery-less Programmed Fuel Injection (PGM-FI) system. And garner attention it should, although EFI is only one part of the greater overall whole in a completely redesigned CRF450R. Specifically, this EFI system utilizes a 50mm throttle body design with a 12-hole injection nozzle fed by a lightweight plastic 50-psi pump to ensure optimum fuel atomization and a precisely targeted fuel charge.

Bringing the full benefits of EFI to bear proved to be an arduous task. Since its introduction, the CRF450R has enjoyed a well-deserved reputation as being the easiest-starting bike in its class, as well as having the best throttle response. So even though it was no small task to improve on the best carburetion system around, thanks to countless hours of testing and perfecting this system the new CRF450R meters fuel even more precisely now. Credit also the intrinsic precision provided by the minute tolerances inherent in a fuel injection design, which allowed Honda engineers to take tuning to a higher level. So the 2009 CRF450R now delivers amazing drive right off the bottom, super-strong midrange punch and a stronger rush of top-end power.

Next, factor in another remarkable benefit that comes as a direct result of this more accurate and efficient fuel metering: this EFI system also achieves a significant improvement in fuel consumption. Therefore, the fuel load can be smaller and lighter yet the CRF450R can still



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handle the longest motos. In addition, the fuel tank itself can now be shorter, smaller and slimmer and that means the seat could be made flatter all the way up to the gas cap to allow the rider a greater range of unimpeded movement on the bike. Reaping handling and rider ergonomic benefits from a fuel injection system? This is typical of the synergistic forward-thinking that created the new CRF450R design.

The PGM-FI system monitors throttle position, intake air and coolant temperatures, air pressure and gear position to accurately map fuel charge and ignition spark, significantly improving partial-throttle response and helping assure excellent rideability. An enlarged AC generator delivers the needed power to the PGM-FI system without a battery, and two crankshaft position sensors (instead of the solo sensor used previously) determine crank position more quickly to provide speedy starts, whether the engine is hot or cold. The engine stop switch also features an integrated LED pre-ride check indicator. This confirms the EFI system is operating normally. In addition, Honda also has available an HRC PGM-FI Setting Tool, which allows CRF450R owners to alter EFI fuel delivery as well as ignition timing over a wide range of settings to alter engine power characteristics.

An all-new engine

Thanks to a wealth of improvements, the new engine spins faster—11,450 rpm—and harder, churning out 56.3 bhp at 8500 rpm and 37.5 lb./ft. of torque at 7000 rpm. This liquid-cooled four-valve Unicam® 449cc engine now utilizes a four-lobe camshaft and individual rocker arms for each exhaust valve to reduce weight and contribute to its higher rpm ceiling. The net advantage is not only more power, but also a broader powerband for better drive out of corners.

Thanks to its complete redesign, the CRF450R's smaller, lighter engine contributes significantly to improvements in the chassis, ultimately adding to new class-leading handling traits. Perhaps most significantly, the 2009 CRF450R engine features a lower overall height and it has been positioned closer to the front wheel, resulting in a lower

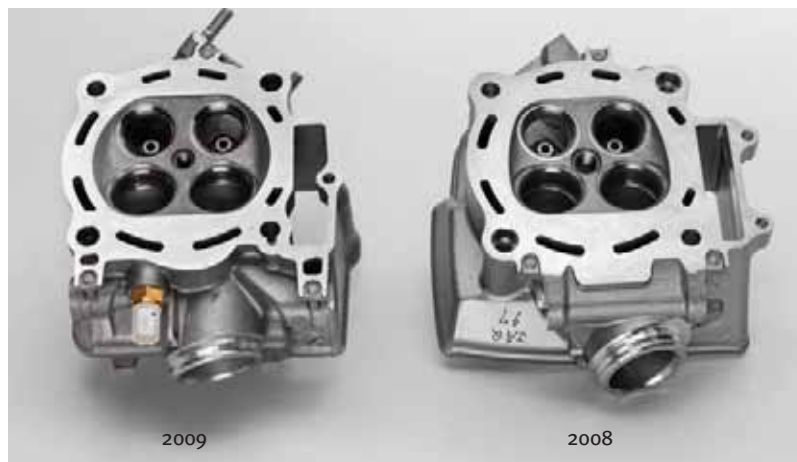


overall Cg and more optimum weight distribution for better handling. This lower Cg also means the engine's rotating mass rides lower in the chassis, producing less gyroscopic effect for more neutral handling.

This reduction in engine height was achieved in part via a shorter cylinder head that now positions the camshaft directly in the cylinder head; previous 450s featured a bolt-on cam mount. More engine height was shaved off by shortening the connecting rod 3.5mm (102.1mm from 105.6mm), which allowed a correspondingly shorter cylinder. In addition, the crankshaft main journal cradles were relocated to the inside of the flywheels to allow a reduction in connecting-rod pin diameter from 34mm to 33mm, which further reduced weight while maintaining overall strength. Shaving a small flat into the bottom of the crankshaft flywheels allowed for a bit more con-rod shrinkage by providing a pinch of added clearance for the piston skirt, while also reducing weight—an insightful bit of efficiency contributing to the shorter engine.

Other changes to the CRF450R powerplant include a reshaped combustion chamber that's a touch shallower to further reduce cylinder head height but features a larger-volume squish area for efficient flame propagation. The lightweight titanium intake valves now have shorter stems, and redesigned valve springs also help reduce overall engine height and permit higher rpm. Slimmer intake valve stems shrink in diameter from 5.5mm to 5.0mm to reduce reciprocating weight, and the cam sprocket is now press-fitted to the camshaft, reducing weight by 20 grams compared to the previous bolted-on design. The use of a new, tougher material in the forged slipper piston permits a thinner crown along with a relocated piston pin, contributing to shorter cylinder height and less reciprocating weight. A low-friction surface treatment on the piston assures high-rev potential.

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Lightweight Ni-SiC cylinder lining provides cooler and quieter operation for extended engine life, and for easier servicing the cylinder attaches to the engine cases with through-bolts instead of studs, allowing in-frame cylinder removal.

The CRF450R incorporates the use of a new, lighter automatic decompression system, so the hot restart procedure is simplified. This cam-integrated plunger and shaft-integrated decompression weight allow for easy starting in both hot and cold conditions.

This new-generation CRF450R features a redesigned five-speed gearbox that incorporates numerous modifications—often measured by a mere millimeter or two—to narrow transmission width and reduce weight without sacrificing durability. Transmission ratios remain the same as last year, and the transmission still incorporates

a gear-position sensor, which now also works in conjunction with the EFI system. This sensor signals a new, sophisticated electronic control module (ECM), which uses a multi-map system to alter ignition plus EFI mapping for optimum power in varying riding situations. Specific maps control the EFI and ignition settings so power application in first and second gears provide maximum acceleration with minimum wheelspin, and third through fifth gears utilize maximum-power mapping.

Eight clutch plates handle the engine's massive torque, and the new CRF450R incorporates only four clutch springs rather than the previous six springs to reduce centrifugal weight, thereby allowing the engine to rev quicker. Kashima coating is applied to the clutch basket and clutch center to improve clutch life and clutch feel.

In keeping with previous practice, a twin-sump lubrication system separates the oil supply for the crankshaft, piston and valve train from the clutch and transmission. This

ensures a cool supply of oil to the clutch, eliminates clutch and transmission material contamination of the engine oil and reduces the amount of circulating oil, which allows the oil pump size to be reduced. A gear-driven balancer serves double duty, reducing vibration while also driving the water pump. A new mechanical water pump seal improves durability, and coolant flow is now rerouted outside the engine cases via a bolt-on flange/jacket, allowing reduction of crankcase and cylinder width as well as overall engine weight. Also, an oil pump strainer is now built into the engine case to reduce the number of parts and shave additional grams.

Sharp eyes will note that exhaust gasses now exit from the left side of the cylinder head. This change shifts an increased length of the head pipe closer to the engine as it wraps around to the right side and culminates with a new muffler that's positioned dramatically farther forward and closer to the CRF450R's center of mass. A large lightweight titanium section in front of the aluminum-body muffler contributes significantly to improved weight distribution and the handling benefits of this radical new exhaust system.

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An all-new HPSD-equipped aluminum frame

Honda's twin-spar aluminum frame with forged aluminum steering head has long proven its worth, and because the new, smaller and lighter engine allowed a full redesign of the frame, the 2009 CRF450R now enjoys the benefits of an all-new iteration that is 14 ounces lighter than the previous version and also significantly narrower. The height of the main frame spars was reduced from 70mm to 66mm and they were also narrowed, 26mm compared to 27mm. Stronger downtubes improve front-end feel, and steering response and overall handling have been improved by moving the steering head pipe back 10mm and giving the frame a slightly steeper caster angle. As a result, the front wheel is now positioned 15mm farther back than before, significantly closer to the crankshaft, which further enhances handling. These changes to steering geometry result in steering action that is lighter, yet at the same time the new engine positioning means there's more weight on the front wheel for more traction, so the CRF450R turns better, especially under hard acceleration.

In back, the swingarm is 18mm longer than last year's for improved traction and the swingarm cross-member wall thickness was reduced from 3.75mm to 3.0mm to save weight. Overall changes to the frame, steering head and swingarm permit a reduction in triple clamp offset from 22mm to 20mm. New forged swingarm pivot plates increase rigidity for improved handling, and the lower engine frame rails are widened for added strength but also beveled to provide added cornering clearance—a smart touch riders will appreciate when deep in a cornering rut. Also, the removable rear subframe features an unusual, almost oval tube shape; flatter on the sides of the tubes to further narrow the bike's profile for superior riding ergonomics, and also shaped to eliminate brackets and cross-members and facilitate improved air-filter access.

Introduced in 2008 as a means to sharpen handling, lighten steering traits and enhance straight-line performance, the Honda Progressive Steering Damper (HPSD), which features a compact damper

attached to the lower triple clamp, is still employed. Thanks to the steadying influence of HPSD, more aggressive steering geometry could be engineered into the CRF450R, which is reflected by the 20mm of offset in the 2009 triple clamps, for improved cornering agility without giving up anything in high-speed handling. In addition, this year's damper has been revalved to better match the steering traits of the 2009 setup, and it also yields a more linear damping effect. In keeping with last year's debut, perhaps the most impressive attribute of HPSD is that it works so seamlessly with the chassis as a whole to build rider confidence; you don't even notice it's there.

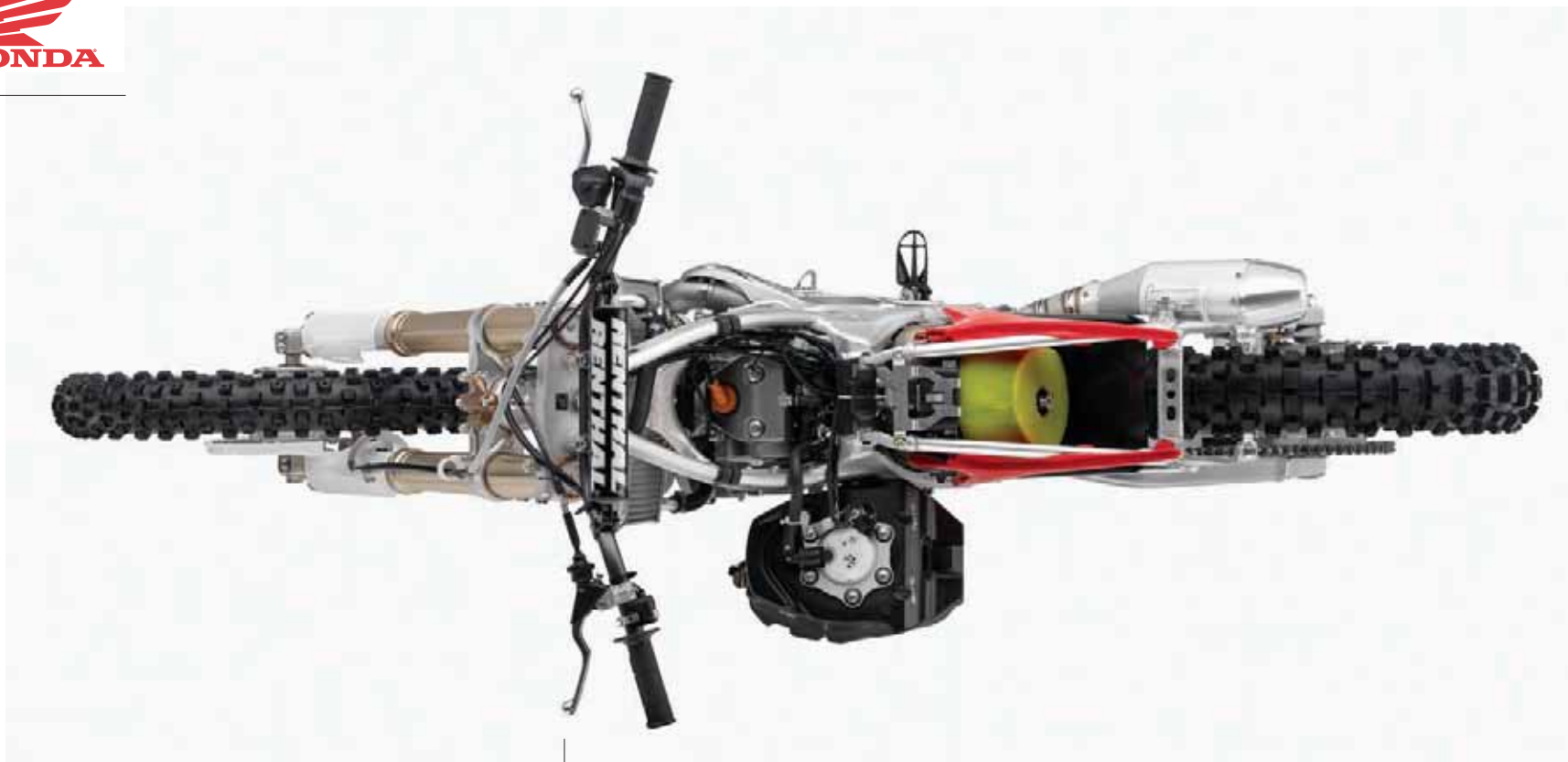
New, plusher suspension

During the process of building the all-new frame into a complete rolling chassis, all options for attendant suspension components were considered. After much testing, the new 2009 CRF450R was given a new, sophisticated Honda-specific Kayaba inverted Air-Oil-Separated (AOS) fork with 48mm-diameter fork legs (up from 47mm last year) that features fully adjustable compression and rebound damping and spring settings developed specifically for the CRF450R. And Honda's proven Pro-Link® Rear Suspension also now incorporates a fully adjustable Kayaba shock made specifically for the CRF450R that features an integrated reservoir plus all-new damping and spring settings. The large 50mm-diameter rear shock piston contributes to consistent performance under the most demanding riding conditions. As a result, both ends feel calmer while riding, demonstrating exceptional bump compliance and suspension plushness. This allows the CRF450R to follow bumps better and accelerate harder over choppy terrain.

Thanks to the all-new chassis and engine, the new CRF450R is now 3.0 pounds lighter than last year's 450R in actual weight, which makes it a class standout in 2009. Weighing 234.8 pounds gassed and ready to go, the CRF450R is now encroaching on the 250F-class neighborhood. And better yet, the myriad chassis changes make the machine markedly slimmer than ever before, so it feels even lighter than it is.

Astride the bike, the rider can immediately sense a much more open riding position; it's so easy to move around, the CRF450R creates a distinctly more modern feeling. This agile nature becomes especially noticeable when leaning the bike over, cornering and jumping, where it feels significantly more maneuverable. Also, thanks to the new chassis geometry the CRF450R's steering action feels distinctly lighter, yet there's more weight on the front wheel for more traction, so it also turns better than ever before. Bottom line: The 2008

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CRF450R already had the lightest weight and best handling in class, but now in 2009 it has leapfrogged far ahead of everyone else. This is, by a good margin, the best-handling CRF450R Honda has ever made.

Details, details

Other chassis highlights include a front wheel with a new, stiffer axle collar. A large-diameter front axle and wide wheel-bearing span provide excellent rigidity. A new rear axle features a diameter of 25mm and large-diameter bearings provide additional rigidity. Axle wall thickness has been reduced from 2.5mm to 2.2mm to save unsprung weight (38 grams), and the rear axle collar is also a new, stronger item.

The HRC works-style rear brake system integrates the rear master cylinder and fluid reservoir, eliminating a separate reservoir and hose. The link-type front brake master cylinder and a lightweight brake rotor provide strong braking; the re-shaped works-style 240mm front brake rotor is also 1.3 ounces lighter than before, and the front disc guard is now smaller, lighter and vented. In back, the 240mm rear brake rotor features a works-style pattern and is 1.0 ounce lighter, while a new plastic disc guard saves an additional 4 grams. Both front and rear wheels feature HRC works-type lightweight aluminum spoke nipples.

In the attention-to-details department, thoughtful touches abound. A new gray color coats the lightweight magnesium head cover, clutch cover and left sidecover; note that the clutch cover has been dished inward for improved foot placement. On the left side resides a new low-profile oil dipstick. A newly designed high-capacity airbox is lighter in weight and improves filter access, and the redesigned sidecover that dovetails into the side panel of the airbox is narrower and improves airflow into the airbox.

Redesigned radiator shrouds are narrowed to aid rider movement and the kickstarter arm is reshaped to reduce weight. A new seat base reduces overall height and width while maintaining the same

amount of foam thickness. New handgrips with a softer compound, new surface pattern and safety-wire grooves are also 3mm longer than before, which permitted the use of shorter cables and brake hose to reduce weight—unsurpassed attention to detail even in areas that might otherwise go unnoticed. The front and rear fenders are redesigned for greater rigidity and the rear fender shape helps prevent mud and debris from gathering on the muffler.

Removable engine mounts allow easier engine removal, and the narrower engine allows elimination of the right-side engine guard to save weight. A new fuel tank tether cable eliminates the need to disconnect the fuel line when accessing the top of the engine—a handy aid to routine maintenance. The plastic fuel tank has been strengthened to ensure proper sealing for the lightweight plastic fuel pump, which resides within the tank. Rider ergonomics are optimized by adapting the handlebar, seat and footpeg height to give the rider a distinctly narrowed perch for improved comfort and handling feel, and the lightweight aluminum brake pedal and shift lever are designed to complement the CRF450R's new ergonomics. As one final note, the fuel cap is shorter than before to allow the rider to easily move farther forward on the tank.

For many, the value of the 2009 CRF450R will be shown on the stopwatch and with the acquisition of trophies. However, there's also a deeper story here, one that emerges with the sum total of countless changes—large and small—that add up to a true next-generation machine, a significant milestone in motocross design. The 2009 CRF450R has vaulted so far ahead that it redefines expectations in the premium class of motocrossers.



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In the all-new and lighter 2009 CRF450R, a brand-new engine with electronic fuel injection, developed concurrently with an entirely new rolling chassis, work together to deliver 450-class-leading power along with CRF250R-style handling. It's an unprecedented blend of power, suspension and handling that together bring a genuine revolution to the premier motocross class.

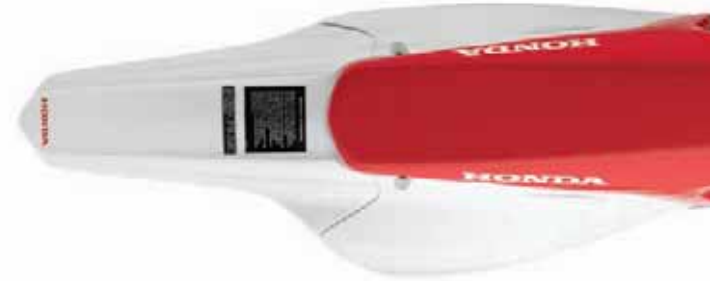
Features & Benefits New for 2009

- All-new lighter engine.
- Programmed Fuel Injection (PGM-FI).
- All-new HPSD-equipped twin-spar aluminum frame featuring a longer swingarm and a lower Cg for improved handling and better turning.
- Kayaba front and rear suspension, featuring upper and lower fork tubes and a shock body developed exclusively for the CRF450R chassis.
- Redesigned higher-capacity airbox for enhanced breathing and increased power also improves filter access.
- Innovative exhaust system improves mass centralization.
- All-new bodywork improves ergonomics.

Engine/Drivetrain

- All-new engine spins faster—11,450 rpm—and harder, churning out 56.3 bhp at 8500 rpm and 37.5 lb./ft. of torque at 7000 rpm.
- Liquid-cooled four-valve Unicam® 449cc engine produces more than 125.3 hp per liter and now utilizes a four-lobe camshaft and individual rocker arms for each exhaust valve to reduce weight and contribute to higher rpm ceiling.
- Engine completely redesigned to lower the overall height and position it closer to front wheel, resulting in a lower overall Cg and better weight distribution for better handling.
- Engine height reduced by shortening length of connecting rod 3.5mm (105.6 to 102.1mm) to allow shorter cylinder.
- Relocated crankshaft main journal cradles (inside of flywheels) allows reduction of connecting-rod pin diameter (34 to 33mm), reducing weight while maintaining overall strength. Crankshaft cutaway eliminates piston skirt contact at BDC, also reducing weight.

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- Reshaped cylinder head combustion chamber is shorter yet has a larger volume squish area for better flame propagation.
- Lightweight titanium intake valves and redesigned valve springs reduce overall engine height and permit higher rpm. New intake valve stem diameters reduced (5.5 to 5.0mm).
- Lower camshaft mount built into the cylinder head to reduce weight and engine height.
- Cam sprocket now press-fitted to camshaft, reducing weight by 20 grams compared to previous bolted design.
- Cylinder attaches to engine cases with through-bolts instead of studs, allowing in-frame cylinder removal.
- New forged slipper-piston material permits a thinner crown, and a relocated piston pin location contributes to shorter cylinder height. Low-friction surface treatment assures high-rev potential.
- Lightweight Ni-SiC cylinder lining provides cooler and quieter operation for extended engine life.
- Redesigned auto decompression and hot restart procedure is simplified and lighter with cam-integrated plunger and shaft-integrated decompression weight for easy starting in hot or cold conditions.
- All-new Programmed Fuel Injection system (PGM-FI) utilizes a 50mm throttle body design with 12-hole injection nozzle fed by lightweight 50-psi pump to ensure optimum fuel atomization and precisely targeted fuel charge. System also achieves an improvement in fuel consumption.

- PGM-FI system monitors throttle position, intake air and coolant temperatures, air pressure and gear position to accurately map fuel charge and ignition spark, significantly improving partial-throttle response and helping assure excellent rideability.
- AC generator enlarged to service PGM-FI system. Two crankshaft position sensors quickly determine crank position to provide quick starts, hot or cold.
- Twin-sump lubrication system separates the oil supply for the crankshaft, piston and valve train from the clutch and transmission. This ensures a cool supply of oil to the clutch, eliminates clutch and transmission material contamination of the engine oil and reduces the amount of circulating oil, allowing the oil pump size to be reduced.
- Redesigned exhaust system incorporates a left-side cylinder head exhaust port, increasing header length and allows muffler to be positioned closer to center of mass, contributing to significantly improved weight distribution and handling.
- Gear-driven balancer reduces vibration and drives the water pump.
- New mechanical water pump seal improves durability.
- Coolant flow rerouted outside engine cases via bolt-on flange/jacket, allowing reduction of crankcase and cylinder width, and overall weight.



- Oil pump strainer now built into the engine case to reduce parts and weight.
- Eight clutch plates handle the engine's massive torque while the number of clutch springs is reduced from six to four. This reduces centrifugal weight, allowing the engine rev quicker.
- Kashima coating applied to the clutch basket and clutch center improve clutch life and clutch feel.
- Numerous transmission modifications narrow transmission width and reduce weight without sacrificing durability.

Chassis/Suspension

- All-new HPSD-equipped twin-spar aluminum frame with forged-aluminum steering head is now 14 ounces lighter than previous design. Spar height was reduced (70 to 66mm) and width was narrowed (27 to 26mm). Stronger downtubes improve front-end feel.
- Steering response and overall handling were improved by moving steering head pipe back 10mm (and closer to swingarm pivot), positioning the front wheel 15mm farther back and closer to the crankshaft.

- Swingarm is 18mm longer for improved traction.
- Frame, steering head and swingarm modifications permit a reduction in triple-clamp offset (22 to 20mm).
- Swingarm cross-member wall thickness was reduced (3.75 to 3.0mm) to save weight.
- Forged swingarm pivot plates increase rigidity for improved handling.
- Lower engine frame rails are widened and beveled to provide added cornering clearance.
- Removable rear subframe was redesigned to eliminate brackets and cross-members. Shape altered to improve air filter access and narrow the bike profile.
- Honda Progressive Steering Damper (HPSD) is revalved for more linear damping. HPSD features a compact damper attached to the lower triple clamp and the steering head to allow more aggressive steering characteristics and assist straight-line handling. Damping action smoothly progresses as handlebar deflection increases, which produces very natural steering characteristics and feel.
- Front and rear wheels feature HRC works-type lightweight aluminum spoke nipples.
- Front wheel featuring new stiffer axle collar provides excellent rigidity.
- Rear axle diameter of 25mm and large-diameter bearings provide additional rigidity. Axle wall thickness reduced (2.5 to 2.2mm) to save weight (38 grams) while axle collar is strengthened for better rigidity.
- Revised, sophisticated inverted Air-Oil-Separated (AOS) fork features exclusive Honda 48mm diameter fork made by Kayaba with all-new damping and spring settings.



- Pro-Link® Rear Suspension features exclusive Kayaba integrated reservoir with all-new damping and spring settings.
- Large 50mm rear shock damper piston diameter for consistent performance under demanding riding conditions.
- HRC works-style rear brake system integrates the rear master-cylinder and fluid reservoir, eliminating the separate reservoir and hose.
- Link-type front brake master cylinder and a lightweight brake rotor provide strong braking.
- Re-shaped works style 240mm front brake rotor is 1.3 ounces lighter. Front disc guard is smaller, lighter and vented.
- 240mm rear brake rotor features works style pattern and is 1 ounce lighter. New plastic disc guard saves 4 grams of weight.

Additional Features

- Honda First: Engine stop switch features an integrated LED pre-ride check indicator. This confirms the EFI system is operating normally.
- New gray-color magnesium head cover, clutch cover and left sidecover.
- Clutch cover profile reshaped for improved foot placement.
- New low-profile oil dipstick resides on left side.
- Redesigned higher-capacity airbox improves filter access.
- New sidecover shape is narrower and improves flow to airbox.
- Redesigned radiator shrouds are narrowed to aid rider movement.
- Kickstarter arm reshaped to reduce weight.

- Seat base redesigned to reduce overall height and width while maintaining foam thickness.
- New handgrips are 3mm longer and feature a softer compound and wire grooves.
- Front and rear fenders redesigned with greater rigidity; rear fender design helps prevent mud and debris from gathering on muffler.
- Removable engine mounts allow easier engine removal.
- Narrower engine allows right-side engine guard to be eliminated, saving weight.
- New fuel tank tether eliminates need to disconnect fuel line to work on top end.
- Rider ergonomics are optimized by adapting the handlebar, seat and footpeg height to place the rider's legs at the narrowest part of the frame for improved comfort and handling feel.
- Lightweight aluminum brake pedal and shift lever are designed to complement new ergonomics.
- Fuel cap height is shorter, allowing rider to move farther forward on the tank.
- Brake pedal features optimized ratio to match integrated rear-brake master-cylinder design.
- Wide, cleated stainless steel footpegs provide excellent grip and are self-cleaning and corrosion resistant.



- Adjustable front brake lever for improved control.
- Quick-adjust clutch perch for easy cable adjustment.
- Aluminum Renthal handlebar (971 bend) is rubber-mounted to help reduce rider fatigue and improve comfort.
- Handlebar holders provide two different mounting positions to match rider preference.
- New handlebar grips add to rider comfort.
- Dunlop 742FA front and a new 120/80-19 D756 rear tires maximize traction.
- Washable, two-stage foam air filter for optimal engine protection and easy maintenance.
- Repackable silencer for maximum performance and minimal noise.
- Comfortable, durable controls and high-quality fasteners.
- Stainless steel clutch cable for long life.
- Honda Racing-inspired colors and graphics.
- When you buy a new Honda Powersports Product, you may be eligible to receive a complimentary one year membership in the Honda Riders Club of America®, which includes an exclusive Members-only magazine, rider training benefits, access to the Members-only Clubhouse Web site and much more. Some limitations apply. For more information on the HRCA®, log on to www.hrca.honda.com.

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Specifications

Model:	2009 CRF450R
Engine Type:	449cc liquid-cooled single-cylinder four-stroke
Bore and Stroke:	96mm x 62.1mm
Compression Ratio:	12.0:1
Valve Train:	Unicam, four-valve; 36mm intake, titanium; 30mm exhaust, steel
Induction:	Programmed Fuel Injection (PGM-FI), 50mm throttle body.
Ignition:	Full Transistor with three-gear-position electronic advance
Transmission:	Close-ratio five-speed
Final Drive:	#520 chain; 13T/48T
Suspension	Front: 48mm inverted Kayaba Air-Oil-Separate (AOS) with 16-position rebound and 18-position compression damping adjustability; 12.2 inches travel Rear: Pro-Link Kayaba single shock with spring preload, 20-position rebound damping adjustability, and compression damping adjustment separated into low-speed (18 positions) and high-speed (1 1/2 turns); 12.6 inches travel
Brakes	Front: Single 240mm disc with twin-piston caliper Rear: Single 240mm disc
Tires	Front: 80/100-21 Rear: 120/80-19
Wheelbase:	58.7 inches
Rake (Caster Angle):	26° 52'
Trail:	114.2mm (4.5 inches)
Seat Height:	37.6 inches
Ground Clearance:	13.1 inches
Fuel Capacity:	1.5 gallons
Color:	Red
Curb Weight*:	234.8 pounds

*Includes all standard equipment, required fluids and full tank of fuel—ready to ride. Consult owner's manual for optional parts.

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